CICUTA VIROSA L. (APIACEAE)–A RARE SPECIES FROM JAMMU & KASHMIR

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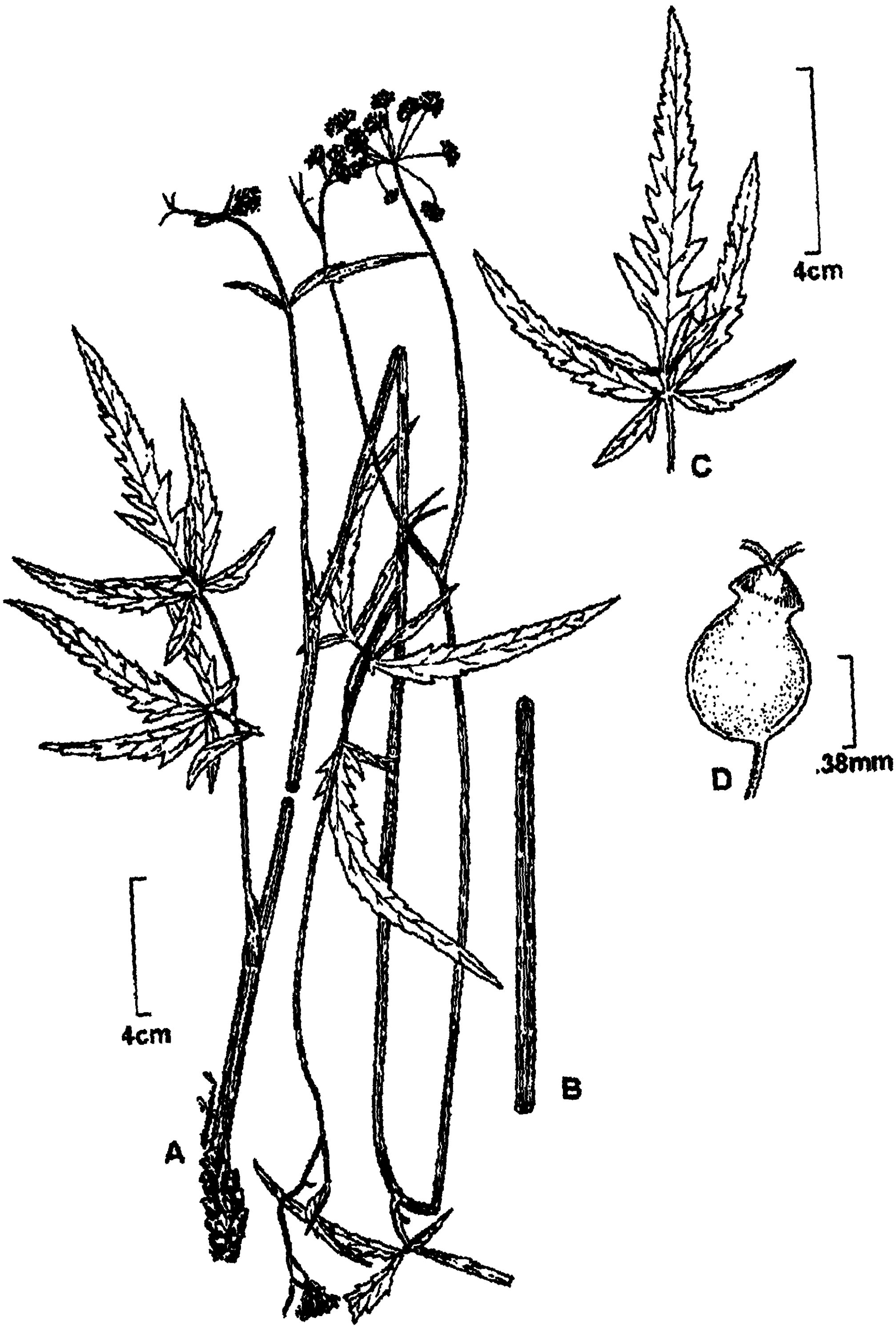
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Current studies on the flora of Jammu & Kashmir state, India, revealed that *Cicuta virosa* L. has a solitary gathering (*Falconer* 488) collected during 1836-1838 by H. Falconer during his mission of plant exploration in N.W. Himalaya. C.B. Clarke (1879) recorded this species from Srinuggar (Srinagar). Later workers on Indian Apiaceae (Mukherjee & Constance 1993) have also cited *Falconer* 488 only in their treatise. There is no other specimen of this taxon from India available either in the herbarium of the Forest Research Institute, Dehradun (DD) or Regional Research Laboratory, Jammu (RRL). The present report of its collection after c. 150 years from surroundings of Vaishno Devi is therefore interesting. The species is a virulent poisonous plant as well as of considerable medicinal importance. A short description along with illustration and a brief note on phytochemistry is provided.

Cicuta virosa L. Sp. Pl. 255. 1753; C.B. Clarke in Hook.f., Fl. Brit. India 2 : 679. 1879; Nasir in Fl. West Pakistan, 20 : 24. 1972; Hiroe, Minosuke, Umbelliferae of World 1154. 1974; Mukherjee & Constance, Umbelliferae (Apiaceae) of India 82. 1993; Mukherjee in N. P. Singh & D. K. Singh, Floral Diversity & Conserv. Strateg. India 4 : 2101-2107. 2001.

"Cow Bane, Water Hemlock"

Erect, perennial herbs to 60 cm high. Roots fibrous-fleshy. Stems hollow, prominently striate, hairy. Leaves 2-3 pinnate; leaflets oblong-narrow lanceolate, acuminate, coarsely serrate-incised lobed, younger ones occasionally entire, margins and ribs hairy, more so on midrib; lobes up to 8 mm long; petiole sheathing, striate, hairy. Involucre absent; rays up to 13, 8-20 mm long, hairy; umbellules ovoid, ovate-obliquely ovoid with 8-15 rays; pedicels to 5 mm long, hairy. Flowers small, white, actinomorphic. Fruits c. 7 mm long, constricted at commisure.



Cicuta virosa L.
A. Habit; B. Portion of stem; C. Leaf; D. Young fruit.

Specimen examined : Jammu & Kashmir : Vaishno Devi-Sanjhichat, 30.8.1989, *B. P. Uniyal* 77422 (BSD).

Notes : In wet and marshy situation, on hill slopes in association with *Pimpinella diversifolia* DC. Few.

Distrib.: Temperate Asia, Europe, North-Central America.

Chromosome number : 2n = 22 (Tutin & al., Fl. Brit. Isles 656. 1952).

Phytochemistry : Quercetin, Isorhamnetin, Kalempferol, Rutin, Isorhamnetin 3-glucoside Isoquercitin, Narcissin (Acta Pot. Pharm. 1972, 29, 417, Chem. Abstr. 1973, 78, 94864 V), Umbelliferone and scopoletin have been isolated from the fruits of *Cicuta virosa* L. (Khim. Prir. Soedin. 1973, 9, 112; Chem. Abstr. 1973, 79, 276sh). The essential oil from the fruits contains γ-Terpinene, β-Pinene, ρ-Cymene, Myerlimonene Camphene, α-Terpinene, B-Phellandrene and an aldehyde. Cicutoxin derived from the plant causes spasmodic action and paralysis of Central nervous system. (Sintetich. Predukty iz Kanifolii skipidara, Akad. Nauk Belorussk. SSR, Tsentr. Nauchn.-Issled. i. Proektn.Inst. Lesokhim. Prom. Tr. Vses. Nauchn. Tekhn. Soveshch., Gorki 1963, 310; Chem. Abstr. 1965, 62, 89296).

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